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ABSTRACT

Today, more than ever before, teachers are devoting much of their intellectual and emotional energy to helping students better understand the school texts that they are required to read. This can best be accomplished through six changes in the way reading comprehension is taught: (1) accept an active-constructive model of reading comprehension; (2) change the kinds of questions that are asked of the selections children read; (3) refocus vocabulary efforts on techniques emphasizing semantic elaboration and semantic fit rather than definition and usage; (4) change the way comprehension skills are taught; (5) develop curricular materials that recognize the fact that comprehension and composition are similar in process; and (6) change the conception of the role of the reading instructor from teacher as manager to teacher as teacher. (HOD)

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Reading Education Report No. 54

READING COMPREHENSION INSTRUCTION: SIX NECESSARY CHANGES

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Abstract

This paper suggests and elucidates six changes we ought to make in the way we teach reading comprehension:

1. We must accept comprehension for what it is.
2. We must change the kinds of questions we ask about selections children read.
3. We must change our attitude toward and practices of teaching vocabulary.
4. We must change the way we teach comprehension skills.
5. We must begin to develop curricular materials that recognize the fact that comprehension and composition are remarkably similar in process.
6. We must change our conception of the role of the teacher in the reading program.

Reading Comprehension Instruction:

Six Necessary Changes

There can be no doubt that children's reading comprehension performance concerns educators at all levels. Today, more than ever before, we are devoting much of our intellectual and emotional energy to trying to help students better understand the texts we require them to read in our schools. There are, I think, three reasons why comprehension has achieved this dominant position.

The first reason is that we no longer spend much energy on issues that once dominated the reading field. Reflecting upon the past 15 years in reading education, I am impressed by some significant changes in the concerns of educators about reading instruction.

When I first entered the field, the issues of debate were:

1. What's the best way to teach beginning reading?
2. Should the alphabet be taught as a prerequisite to reading instruction?
3. How can a school build a sound individualized reading program?

Even at that time only a few of my colleagues believed that our energies and efforts should be focused on the comprehension issue. Some even thought that there was little one could do to train comprehension (believing, I suppose, that it was a matter properly left to the fates of intelligence and experience).

But the times have changed. For better or worse, at least if one is to regard available instructional materials as a barometer of practice, the issue of early reading seems settled, with most commercial programs teaching phonics early and intensively.

Also it is hard to find commercial reading programs that do not teach the alphabet early on, most often in kindergarten readiness programs.

I mean neither to celebrate nor condemn the broad consensus on these issues; rather, I only make the observation that broad consensus frees psychic energy to examine other issues that may have gone unexamined previously.

Regarding individualization, two kinds of conclusions were reached: (1) that progress in reading should be monitored frequently, minutely (note the myriad of specific skills tests at the end of every unit and level in most commercial programs), and individually; (2) that individualized instruction meant offering practice materials for children to complete individually and independently. Unlike the consensus on early phonics and the alphabet, however, I detect serious discontent in the field about our current practices of individualization.

A second reason for the new interest in comprehension comes directly from concerns of practitioners. All too frequently, when meeting with groups of administrators or reading committees from school districts, I have encountered this scenario. The

group expresses the dilemma of their reading program's test results, which goes like this:

> You know, when we look at our primary grade results we feel good about our program. Our kids are scoring above national norms, which is more than we have a right to expect. Then we look beyond Grade 3 and what we find is a gradual slide in those scores, relative to national norms, all the way into high school.

This observation is usually followed by the conclusion that:

> We must be doing a good job of teaching the decoding skills that characterize the primary grades and a mediocre job of teaching the comprehension skills that characterize the intermediate grades. What can we do about it?

The data released recently from National Assessment should reinforce a concern like this. The assessment (NAEP, 1981) indicates that during the seventies, we made excellent progress for nine-year-olds; however, we did not fare well in helping thirteen-year-olds or seventeen-year-olds, particularly in test items requiring inferential and interpretive comprehension.

The third factor promoting comprehension concerns stems from a renaissance in psychology. From 1920 to 1965, psychologists, wedded as they were to their behavioristic models, did not study reading. Reading was generally regarded as too complex a process to examine, given the constraints of the behavioral perspective. But the past decade has witnessed a redirection of perspective

among psychologists. Indeed the relatively new field of cognitive psychology considers the reading process to be one of its most precious objects of study, encompassing as it does sub-processes like attention, perception, encoding, comprehension, memory, information storage, and retrieval.

As a result, psychology has returned to one of its rightful homes: the study of reading. Reading education has benefitted greatly from the return, for new insight into cognition has provided a wealth of ideas and hypotheses worthy of testing in the ultimate laboratory--the classroom.

These three forces (consensus on other matters, heightened concern about comprehension failures, and a new set of intellectual challenges), then, have converged to create an atmosphere in which the psychic energy of the reading field has been unleashed as the study of comprehension.

The challenge we must meet is the question posed by the school reading committees: "What can we do about it?" While there may be others, at this time I believe that we have gathered enough research, theory, and practical wisdom to support these six changes:

1. We must accept comprehension for what it is.
2. We must change the kinds of questions we ask about selections children read.
3. We must change our attitude toward and practices of teaching vocabulary.

4. We must change the way we teach comprehension skills.
5. We must begin to develop curricular materials that recognize the fact that comprehension and composition are remarkably similar in process.
6. We must change our conception of the role of the teacher in the reading program.

The Truth About Comprehension

Prior to 1970, our view of the comprehension process was driven by our fixation upon the text as an object of study. Comprehension was viewed as some degree of "approximation" to the text read. And, if we had any notion that readers build mental models as they read, then our standard for what a mental model should look like was the text itself.

For a variety of historical, political, and theoretical reasons too detailed to elucidate here, our views of comprehension and text have changed dramatically. No longer do we regard text as a fixed object that the reader is supposed to "approximate" as closely as possible as she/he reads. Instead we now view text as a sort of "blueprint" for meaning, a set of "tracks" or "clues" that the reader uses as she/he builds a model of what the text means (see Collins, Brown, & Larkin, 1980).

In this new view, we recognize that no text is ever fully explicit, that no text ever specifies all the relationships among events, motivation of characters, and nuances of tone and style that every author hopes readers will infer as they read.

Instead, authors omit from their texts exactly those relationships and nuances they expect (and hope) readers can figure out for themselves. And as readers, we would be bored to death if authors chose to specify these matters, saying to ourselves, "Well, I knew that!"

In short, what this new view suggests is that readers play a much more active-constructive role in their own comprehension than our earlier passive-receptive views dictated.

An active-constructive model of comprehension has enormous implications for the role of the classroom teacher in promoting comprehension. A teacher can no longer regard the text as the ultimate criterion for defining what good comprehension is; instead she/he must view the text, along with students' prior knowledge, students' strategies, the task, and the classroom situation, as one facet in the complex array we call comprehension. Now a teacher must know as much about the influence of these other facets (prior knowledge, strategies, task, situation) as she/he knows about the text itself. In fact, these other facets, especially prior knowledge, strategies, and task, form the basis for the other remaining five changes outlined in the rest of this presentation.

Changing Questions

Durkin (1978-79) and her co-workers spent some 17,997 minutes observing reading lessons in intermediate grade classrooms. One of the conclusions she drew from these

observations was that teachers devote much of their class time during reading to asking students questions about stories they have just read. Students, conversely, spend lots of time answering questions, or listening to classmates answer questions. Furthermore, these sessions (described by Durkin as assessment rather than teaching activities) tended to be characterized by relatively low-level, literally-based questions in search of single correct answers. We have all seen this; probably most of us, myself included, have done it ourselves. I ask a question. I call upon Suzie. She gives an answer other than the one I had in mind. I turn toward Tommy. He gives a second answer, but still not the one I had in mind. My head bobs from student to student until someone finally gives the answer I was looking for. It is a game we play called "Guess what's in my head."

When Durkin (1981) turned from classroom observation to teacher's manuals, she discovered a remarkably similar situation--lots of space devoted to story questions, lots of literal level questions in search of single correct answers [and manuals provided correct answers to each comprehension question, save those that invited almost any and every response (coded as "answers will vary")].

Beck and her colleagues (Beck, McKeown, McCaslin, & Burkes, 1979) have also examined teacher's manual questions. Reading their analysis of questions, one is struck by another facet of the questions in manuals. Story questions represent a random

barrage of questions that do not cohere with one another. They do not form a line of questions to lead children through the main crises and events of a story so that they can build their own coherent representation of its meaning.

The story map. On the basis of examining recent research about story comprehension, Beck (1984) suggests that, prior to question generation, teachers need to develop an outline of the important ideas in the story, or, what Beck has come to call a "story map." A story map consists of a specification of the main character's problem in the story and the attempts to solve that problem, leading, eventually, to a resolution, and perhaps a moral or lesson about life. Having generated such a map, Beck suggests that teachers develop questions that elicit major components of the story map. Questions that elicit either too general or too specific responses should not be used during initial guided reading discussions. The flow of the story, from inception to resolution, serves as the paramount criterion for question selection or creation.

Translated into practical issues regarding basal reading questions, this analysis suggests that in addition to developing questions that go beyond the literal information provided in the text, guided reading questions should be limited such that they elicit only those details that drive the flow of the story, that is, problems, goals, attempts to solve problems, characters' reactions, resolution, and theme (or moral).

Recent research evidence (Beck, Omanson, & McKeown, 1982; Gordon & Pearson, 1983; Singer & Donlan, 1982) validates exactly such a notion. Questions that focus student attention on salient story elements elicit better comprehension and/or recall of the story in which such questions are embedded as well as better recall of new stories for which no questions are asked at all. Apparently, the systematic application of such a framework for story comprehension helps students develop their own frameworks for understanding stories; such a framework many very well serve as a strategic device for understanding and recalling what is read.

Pre-reading questions. In addition to guided reading questions, researchers have examined pre-reading questions intended to build background for story comprehension. Here we have considerable evidence to suggest that it matters a great deal what kind of questions we use to prepare for story comprehension: A set for predicting, relating text to prior knowledge, and evaluating predicted outcomes is superior to more literal/factual orientation.

For example, Hansen and Pearson (Hansen & Pearson, 1980; Hansen, 1981; Hansen & Pearson, 1983) have conducted several studies examining the effect of story questions, particularly with reference to enhancing children's ability to answer inferential comprehension questions. Two findings in their research are relevant to our concerns. First, they found that

simply making sure that guided reading questions (those questions asked either during or after stories) include a lot of inference questions enhances both story specific inferential comprehension and comprehension of new stories. Second, they found that the additional provision of a pre-reading set for invoking relevant prior knowledge and predicting what will happen in a story coupled with discussion of why it is important to do so results in even better inferential comprehension, and even helps literal comprehension. The steps in developing questions to invoke prior knowledge and engage in prediction are not difficult (see Hansen & Hubbard, 1984, for details on this technique). Basically, a teacher must:

1. Read the text.
2. Decide on a few (2-4) key ideas, where key ideas usually represent the theme or moral, the main character's basic problem, or a key action, event, or feeling.
3. For each key idea, ask "Have you ever . . .?" and "What do you think X will do . . .?"
4. Before reading, spend a few minutes discussing each of the two questions for each key idea.
5. (Optional) After reading, return to the predictions to discuss reasons for differences or similarities between predictions and what actually happened.
6. Somewhere discuss why you are doing all this.

In trying to reconcile the available data on what promotes better understanding of textbook selections with conventional practices, I have derived the following instructional guidelines for asking questions. (For a more complete treatment, see Pearson, 1982.)

1. Ask questions that encourage children to relate the story to be read to prior experiences.
2. Then, try to elicit predictions about what story characters will do in similar circumstances.
3. Ask purpose setting questions that persist as long as possible throughout the reading of a selection.
4. Immediately after reading, return to the purpose.
5. Use a story map to generate guided reading questions.
6. Include follow-up tasks that encourage synthesis of the entire story (retelling, dramatizing, summarizing).
7. Reserve comparison questions (with prior knowledge and/or other stories) for a second pass through the story.
8. Reserve author's craft questions (e.g., techniques for persuasion) for a second (even a third) pass.

Vocabulary Instruction

Dale Johnson and I have been so concerned about vocabulary instruction that we have written two books devoted exclusively to the topic (Johnson & Pearson, 1978, 1984). Our main concerns in those books are twofold: (1) that people will recognize the

primacy of meaning vocabulary over word recognition vocabulary, and (2) that they will embrace our philosophy of ownership of a word's meaning over facility at defining the word. Let me explain with an anecdote:

Several years ago a student teacher brought in to my colleague, Robert Schreiner (University of Minnesota) a lesson plan and some student papers from a reading lesson he had taught to some fifth-grade students, remarking, "Let me tell you about my great vocabulary lesson."

"What did you do?" Schreiner asked with anticipation.

"Well first I had them look up the new words in their pocket dictionaries . . ."

"And then? . . ."

"I knew you'd ask that," he added firmly. "And then I asked them to write the words in sentences."

"Can I see some student papers?" Schreiner asked. The first word on the first paper was exasperated. The student had written, for a definition, vexed. And her accompanying sentence was, He was exasperated.

At that point, all the student teacher knew was that (1) the child could find the word in the dictionary, (2) she could copy the first available definition, and (3) she recognized that a word ending in -ed could serve in the past participle slot in a sentence. He knew nothing about whether the child knew the meaning of the word; he knew nothing about whether the child

owned the word, to use Beck's (1984) term for what it means to know a new vocabulary item in its fullest sense.

The problem illustrated in this scenario is similar to the dilemma faced by teachers each time they find a new list of vocabulary words for a new reading selection (or when they come to a new chapter in a social studies or science textbook). How much concept development needs to be done before children will be able to (1) understand the text at hand and/or (2) use that new vocabulary when they read new and different texts?

While we do not have the final answer on these questions, we do have some guidelines that we can derive from recent research on the relationship between knowledge about a topic and comprehension of texts related to that topic. First, there is no question about that relationship: A reader's knowledge about a topic, particularly key vocabulary included in text about to be read is a better predictor of comprehension of that text than is any measure of reading ability or achievement (Johnston & Pearson, 1982; Johnston, 1984). Second, several studies point to the advantage of a fullblown concept development approach to vocabulary over a more conventional definition and sentence approach. Particularly useful have been semantic mapping and semantic feature analysis approaches (Johnson, Toms-Bronowski, & Pittleman, 1982; Johnson, 1983; Johnson & Pearson, 1984), as well as other approaches that emphasize semantic elaboration (Kameenui, Carnine & Freschi, 1982; Beck, Perfetti, & McKeown, 1982).

What these more useful approaches have in common is that they emphasize where a word fits in children's semantic repertoire rather than what it means or how it is used in sentences. That's what it means to own a word--to know what it is like and how it is different from other words that a child already knows.

In order to accomplish this goal for vocabulary, we must alter our stance toward vocabulary instruction (for a more complete treatment of these issues, see Johnson, 1983; or Johnson, Toms-Bronowski, & Pittleman, 1982). We must change the questions we ask when we get ready to help a child acquire a new concept. Too often we have asked:

> What is it the children do not know and how can I get that into their heads?

The better question is:

> What is it that the children do know that is enough like the new concepts so that I can use it as an anchor point?

We can learn new concepts only in relationship to concepts we already possess. This is a principle that we, as considerate adults, use all the time with our peers when we explain a new phenomenon. We say:

> Well it is sort of like X . . . but . . .

We establish a contact between the new and a known concept; then we explain how the new concept is different from the known concept. We must extend the same courtesy to children. We must refocus our vocabulary efforts on techniques emphasizing semantic

elaboration and semantic fit rather than definition and usage. Only then will we achieve the goal of ownership we would all like to achieve.

Comprehension Skill Instruction

When Durkin (1978-79) conducted her classroom observation study, one of her goals was to determine when, how, and how often teachers engaged in direct, explicit instruction for comprehension skills; that is, what did teachers tell students about how they should perform the various comprehension tasks assigned on the myriad of worksheets and workbook pages in their reading programs? Of those 17,997 minutes, she found precisely 45 minutes devoted to this kind of direct instruction in comprehension (and some 11 minutes of that was on the influence of punctuation). She found lots of what she labeled mentioning--saying just enough about an assignment so that students understood the formal requirements of the task, but stopping short of demonstrating how to solve the task cognitively, or what to look for in the task as clues for generating a solution.

Durkin (1981) conducted a similar analysis of basal manuals, looking for instances of comprehension instruction. While the manuals fared somewhat better than the teachers, they still fell woefully short of what we might want to call substantive instruction. Most of these instructional directives consisted of a single sentence, perhaps something like: "Tell the students that the main idea is the most important idea in the paragraph."

Rarely was much in the way of modeling, guided practice, or substantive feedback suggested. Again, Durkin felt that "mentioning" better characterized what the manuals were offering in the way of instructional directives to teachers.

One can argue that the reason that both teachers and manuals offer little in the way of explicit instruction in how to solve comprehension tasks is that comprehension is such a complex interactive process--that is, influenced by so many situational and individual factors. Until recently we simply have not understood the comprehension process well enough to be able to identify and define basic and distinct comprehension skills, let alone determine strategies that teachers could offer students concerning how to apply these skills consistently across the range of texts and practice activities they are likely to encounter.

Recent researchers, however, have been successful in helping students develop strategies for discovering some regularities across different texts, tasks, and situations.

Questions. Hansen (1981), in the same study mentioned earlier in connection with questions, tried to determine whether she could improve second-grade students' ability to answer questions that did not have explicit answers in the texts (what we usually call inferential comprehension). Recall that she found that providing students several opportunities to respond to inferential guided reading and follow-up questions, or employing

a pre-reading strategy designed to encourage students to use their own experiences to predict and evaluate story characters' problems and actions, produced reliable increases in the second grade students' ability to answer inferential comprehension questions, at no loss to their performance on literal tasks. Apparently what happened was that students either exposed to lots of questions requiring answers from prior knowledge or encouraged to use a prior knowledge to predict and evaluate story events learned that it was legitimate to invoke one's prior knowledge in generating answers to questions. Several students actually volunteered that prior to the training they did not know that it was "O.K." to use "their own words" to answer questions.

In a second, related study Hansen and Pearson (1983) combined the two treatments (strategy training and lots of inferential post reading questions) and compared the hybrid to a "business as usual" control group (do whatever the Teacher's Manual says) for both good (reading test scores averaging about 6.3) and poor (averaging about 3.2) fourth-grade students. In addition, they trained teachers to administer the treatments instead of having the experimenters do so. Also, they stressed the metacognitive (self-awareness of the strategy) dimension in this training. Before each training session, they discussed with students what it was they were doing prior to each story (using prior knowledge to predict story events) and why.

After 10 weeks of training, few differences emerged among good readers; however, strong and reliable differences surfaced among the poor readers. In each case these differences favored the hybrid inference training group. In fact, on one measure, the poor experimental students performed as well as the good control students despite a 3-year grade norm difference in average reading test scores. Differences between experimental and control groups were observed on both literal and inferential measures but were more striking on the inferential measures.

Hansen and Pearson concluded that the training was most effective for precisely those students who typically exhibit frustration in performing comprehension tasks. They suggested that the lack of consistent reliable differences among good readers might be attributed to the fact that many good readers often discover such strategies on their own through sheer exposure to various tasks. Poor readers appear to require more and more careful guidance from a teacher.

It is also important to note that teachers who participated in the study expressed great satisfaction with the experimental treatment, stating that their reading group discussions were more lively and interesting. They also expressed some concern in getting used to the treatment, the variety of responses offered (they had to learn to live with the fact that answers do vary), and the difficulty of generating good inference questions.

Inference training. Gordon and Pearson (1983) continued this general line of inference training research by developing and evaluating an even more explicit technique for helping children become better at drawing inferences. As a first step, they established four requisite sub-tasks that ought to be completed for every inference task: (1) ask the inference question, (2) answer it, (3) find clues in the text to support the inference, and (4) tell how to get from the clues to the answer (i.e., give a "line of reasoning"). In their 8-week training procedure, they led groups of fourth-grade students through a set of stages varying along a continuum of responsibility for task completion, as detailed in Table 1.

Insert Table 1 about here.

In Stage 1, the teacher takes all the responsibility. In Stage 4, the student takes most of the responsibility. In a sense Stage 1 represents modeling, and Stage 4, independent practice or application. Stages 2 and 3 represent guided practice. In a sense, instruction can be conceptualized as what happens in those intermediate stages between total teacher responsibility (modeling) and total student responsibility (practice or application).

In fact, the whole procedure can be depicted graphically, as in Figure 1 developed by Pearson and Gallagher (1983, after

Campione, 1981). In this model, the basic assumption is that the completion of any task can be conceptualized as requiring some varying proportion of responsibility from the teacher and the students. The diagonal line from upper left to lower right depicts such varying degrees, ranging from all teacher (i.e., modeling) in the upper left corner to all students in the lower right corner. What ensues between these extremes is guided practice, or what might be called the "gradual release of responsibility" from teacher to student.

Insert Figure 1 about here.

Question-answer relationships. Another example of the model: Raphael (Raphael & Wonnacutt, in press; Raphael & Pearson, in press) has conducted several studies that focus students' attention on how they should vary their strategies for generating answers to questions. Raphael contends that they should vary strategies as a function of the task demands of the question (Does it look like I should go to the text or to my head for an answer?) in relationship to the information available (What does the text say about this? and What do I already know about this issue?). Using Pearson and Johnson's (1978) trichotomy for classifying question-answer relations (text-explicit, text-implicit, and script-implicit), she has taught fourth-, sixth-, and eighth-grade students to discriminate among

three situations, as illustrated in relation to Text (1): where both questions and answer come from the same sentence in the text (Text 2), where the question and the answer come from different parts of the text (Text 3), and where the question is motivated by the text but the answer comes from the reader's prior knowledge (Text 4).

Text: (1) Matthew was afraid Susan would beat him in the tennis match. He broke both of Susan's rackets the night before the match.

(2) Who was afraid? Matthew

(3) Why did Matthew break both of Susan's rackets? He was afraid Susan would beat him.

(4) Why was Matthew afraid? Maybe Susan was a better player.

Raphael, et al. teach the students to label these three strategies RIGHT THERE, THINK and SEARCH, and ON MY OWN, respectively, as they answer the questions. In their work, they have found that students of all ability groups and all grade levels who received systematic and directed instruction in this technique were better able to comprehend new texts and to monitor their own comprehension. Like students in the Hansen and Pearson (1983) study, one student said, when he learned about the ON MY OWN strategy, "I never knew I could get answers from my head before." Raphael's procedure (see Raphael, [illegible]2 or 1984 for complete details) can also be viewed as an [illegible]ation of the

model in Figure 1. Think of the entire procedure as requiring the completion of 4 tasks (depicted in Table 2), consisting of: (1) asking a question, (2) answering it, (3) classifying the Question-Answer relationship, and (4) telling why it deserves that classification.

Insert Table 2 about here.

Notice how Stages 1-4 represent the same sort of logic present in the Gordon and Pearson (1983) work. Raphael, however, has added a Stage 5, one in which students generate their own questions and then apply the other sub-tasks. I regard this additional step as representing "true ownership" of the strategy because, at this point, it comes under complete student control.

Reciprocal teaching. Palincsar and Brown (1984) have developed a somewhat different application of this model for helping remedial junior high students improve their comprehension of content area materials. What is particularly interesting in this work is the interaction between teacher and student in the small group training. Dubbed reciprocal teaching, the teacher meets with a small group (N = 5 to 15 students) and begins by modeling four tasks she wants all students to be able to perform over each paragraph or segment read from the content area (science and social studies) materials they read:

1. Summarize the paragraph or segment in a sentence,
2. Ask a good question or two,
3. Clarify hard parts of the paragraph, and
4. Predict what the next paragraph or segment will discuss.

Initially the students' role is to concur on the summary and the quality of the questions, to answer the questions, and to help clarify unclear text segments. After a few models, the teacher asks the students to take over the role of "teacher." Whoever is playing "teacher" must generate the summary, ask a few questions, lead a discussion of unclear words or parts, and predict the next sub-topic. Whoever is playing "student" must help revise the summary, answer the questions (or suggest alternative questions), clarify unclear parts, and concur in (or disagree with) the prediction.

Once the teacher turns over the reins to the student, he or she:

1. takes a regular turn as "teacher,"
2. provides feedback about the quality of summaries or questions,
3. provides encouragement to students playing the "teacher" role ("you must feel good about the way you generated that summary!"),
4. keeps the students on track, and
5. encourages each student playing the teacher role to take <u>one</u> step beyond their present level of competence (based

upon individual diagnosis about where each student is operating).

Additionally, at the end of each 25-30 minute reciprocal teaching period, students receive a completely novel passage, for which they are to generate a summary and answer several questions independently.

Palincsar and Brown have applied this technique to triads (1 teacher and 2 students), small groups conducted by volunteer remedial reading teachers, and to non-volunteer intermediate grade teachers working with regular reading groups. In all cases the gains of these students has been dramatic. Typically they go from less than 40% correct on the daily independent exercises to over 80% correct on questions or summaries. The effects have proven durable over periods ranging from 8 weeks to 6 months. And students receiving this training make gains in their social studies and science classwork moving them, an average, from the 20th percentile to the 60th or 70th percentile.

Referring back to the model in Figure 1, reciprocal teaching may provide the clearest and most readily "implementable" example of gradually releasing task responsibility from teacher to student.

This group of studies provides evidence that comprehension can be taught after all. They also suggest that what is missing in our current milieu (what I like to call our practice-only approach to comprehension) is the critical element of the teacher

interacting with groups of students to help them gain more personal control over the instructional environment in which we place them and the tasks we require them to perform in that environment (see Pearson & Leys, in press, for further examples of application of this model).

Comprehending and Composing

In May 1983, the entire issue of Language Arts, the elementary-focused journal of the National Council of Teachers of English, was devoted to explicating the theoretical and practical interfaces between reading and writing. What is interesting about that issue is that as one reads it, one soon discovers that the authors of the various articles are not writing about similarities in phonics for reading and phonics for spelling! Instead, the broad points of similarity are to be found when one considers the basic similarity between composing a text and comprehending a text. Several authors, in fact, make the point that readers have to, at least metaphorically, compose their own texts as they read.

Whether this metaphor of a reader as a writer holds up point for point is not really the issue. What 's truly at issue is that modern theories of comprehension (cf. Change 1, pp. 7-8) require us as educators to realize that the whole process of comprehension is much more active, constructive, and reader-based than our older theories suggested. No longer can we think of comprehension as passive, receptive, and text-based. No longer

can we think of meaning as residing "in the text;" instead, we must regard each and every text students read as a "blueprint" to guide students in "building" their own model of what the text means. The text sets some broad boundaries on the range of permissible meanings, but it does not specify particular meanings. Particular meanings are negotiations between an author and a reader, with a teacher playing the role of a guide in helping that student or those students negotiate a meaning.

To realize the truth of this perspective, all one has to do is to watch a teacher and some students read and discuss a typical pre-primer story--a six-page story consisting of 80 words, 4 to 6 pictures, and 20 comprehension questions in the teacher's manual. The key question is why are there 20 comprehension questions and what are they about? A few, we know, are about the words in the text. A few more, perhaps, are about the pictures. But many are really about students' prior knowledge of the scenarios only hinted at by the text and the pictures. Why are they there? They are there because the people who wrote them realized (most likely intuitively and unconsciously) that a complete understanding of the story could not occur without providing cues to help "fill-in-the-gaps" left in the combination of text and pictures on the page. To corroborate for yourself that even a novice reader's understanding is richer than the explicit message on the page, ask a student who has just read and discussed one of these

"stories" to retell it to you. You'll likely find rich elaborations, indicating that he or she has added much in building a personal model of what the text means.

Tierney and Pearson (1983) have noted the similarity of several subprocesses in composing and comprehending. They note that writing entails planning, composing, and revising. Writers gather information (from their own knowledge or from reading designed to bolster their own knowledge), establish a purpose, and hypothesize an audience when they plan their writing. They begin to set pen to paper (or in modern technology to create dots on a cathode-ray tube) as they compose. And they can revise the text they have created during and/or after composing. Tierney and Pearson also note that these subprocesses are not necessarily distinct stages--that one can, for example, revise one's plans or composition, plan one's revisions. Then they argue that good reading entails exactly the same sort of subprocesses. They claim that good readers will plan their reading (note, for example, the kinds of pre-reading activities described in the earlier section on vocabulary), compose at least a tentative meaning as they read, and constantly revise that meaning in accordance with new information they gain from the text's blueprint or from new insight from their own store of knowledge. Also, revision can and does occur when a teacher guides students in a discussion. In fact, the real purpose of story discussion may be to help students revise their models of what a text means,

to help them take new perspectives and align themselves to characters and events in ways they have not yet considered.

The difficulty in separating comprehension and composition can also be seen in certain activities teachers may ask students to do. For example, suppose a teacher gives a group of fourth-grade students an assignment in which they are told that a writer was careless in composing a news article and inadvertently included some irrelevant information. The students' task is to edit out that irrelevant information and replace it with better information. Is this an act of composition or comprehension? I cannot tell.

Or suppose a third-grade teacher, concerned about figurative language, asks a group of students to replace certain literal expressions with figurative paraphrases (or vice-versa). Is this composition or comprehension? I cannot tell.

Or suppose a group of seventh-grade students rewrites a part of a chapter in their science text in order to make it more understandable to a group of sixth-grade students. Is this composition or comprehension? I cannot tell.

Or suppose a teacher, conducting a writing conference with a first-grade student, asks that student whether the audience would like to know or need to know the information contained in a particular paragraph. Is this composition or comprehension? Again, I cannot make the distinction.

Teachers who choose to accept this basic process similarity between comprehension and composition will discover that their role in teaching is not so much to sit in judgment about what is right or wrong in an essay, a story, or an answer to a question. They will discover that their role is to act as a sort of tour-guide to help students see richness and possibility with different language, different interpretations, different perspectives cued by different questions. (For a more complete treatment of these issues and more specific instructional suggestions on teaching reading and writing together, see the May 1983 issue of Language Arts, and Indrisano, 1984.)

Were I to make a prediction about the single most important curriculum change in language instruction that will take place in the next decade, it would be that we will no longer separate instruction in reading and writing. It is one of the most exciting prospects I can think of.

Changing Role for Teachers

Taken together, these first five changes that I am advocating imply a sixth more pervasive change in our prevailing model of the role of the teacher in the educational environment.

The model of a teacher implicit in the practices of the seventies was that of a manager--a person who arranged materials, tests, and the classroom environment such that learning could occur. But the critical test of whether learning did occur was left up to the child as she interacted with the materials.

Children practiced applying skills: if they learned them, fine; we always had more skills for them to practice; if they did not, fine; we always had more worksheets and duplicating sheets for that same skill. And the most important rule in such a mastery role was that practice makes perfect, leading, of course, to the ironic condition that children spent most of their time working on precisely that subset of skills they performed least well.

Why did we embrace such a model? There were several forces at work. First, the press for accountability and minimal competencies forced us to be accountable for something. And we opted for all the bits and pieces rather than the entire reading process. Second, the notion of mastery learning, presented so elegantly by Bloom (1968) and Carroll (1963), made such a system seem reasonable to us. Third, our friends in publishing unwittingly aided and abetted the movement by providing seductively attractive materials and management schemes. The fascination with materials has become so prevalent that, in a recent survey, Shannon (1983) found that virtually all of the administrators and a high proportion of teachers believe that materials <u>are</u> the reading program.

I would like to propose a new model for the late 1980s: a model in which the teacher assumes a more central and active role in providing instruction, a model in which practice is augmented by teacher modeling, guided practice and substantive feedback, a model in which the teacher and the child move along that

continuum of task responsibility (Figure 1), a model that says just because we want students to end up in a state where they take total responsibility for task completion does not mean that we should begin by giving them that total responsibility.

In this model, teachers assume new and different roles: They become sharers of secrets, co-conspirators, coaches, and cheerleaders. Because they realize that they are readers and writers who share an interpretive community with their students, they become willing to share the secrets of their own cognitive successes (and failures!) with students. They often co-conspire with their students to see if they can "get to the author" or try to "trick the reader." They act sometimes the way good coaches do; they are there at just the right moment with just the right piece of information or just the right pat on the back. And they act as cheerleaders for their students, encouraging them to take new steps toward independence and focusing on their remarkable strengths rather than their weaknesses.

If we adopt this new view of the teacher, we will be taking the mastery notions of Bloom and Carroll more seriously than ever before because we will be recognizing an often forgotten feature of mastery learning: That additional teacher assistance was, along with additional time on task, a basic component in their models. We will also be recognizing that true individualization has never meant that instruction is <u>delivered</u> individually, only that progress is <u>monitored</u> individually, and that what may be

best for a given individual is not another worksheet but maybe a live body present to provide the guidance and feedback it will take to bring him or her to an independent level of performance.)

As a metaphor for this new model, I would like to replace the metaphor of teacher as manager with a metaphor of the teacher as teacher. I know the idea is not startlingly fresh, but it does have a nice ring to it.

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Table 1

Stages of responsibility in inference training task

(after Gordon & Pearson, 1983)

Stages	Subtasks			
	Ask Question	Answer Question	Find Clues	Line of Reasoning
1. Modeling	T	T	T	T
2. Guided Practice	T	T	S	S
3. Guided Practice	T	S	T	S
4. Independent Practice	T	S	S	S

Note. T = Teacher does subtask, S = Student does subtask

Table 2

Stages of responsibility in question-answer relationship task

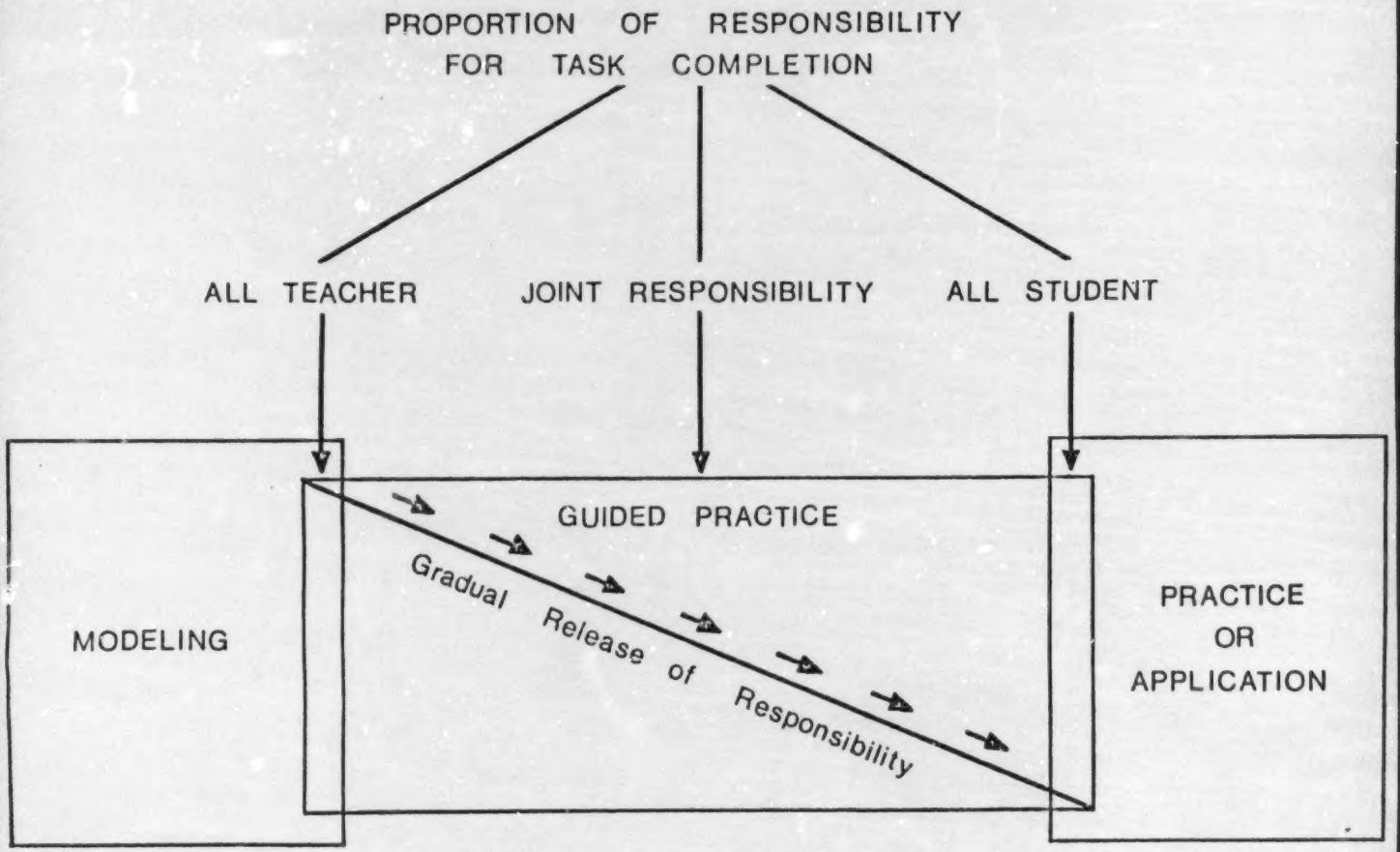
(after Raphael, 1982, 1984)

Stages	Subtasks			
	Ask Question	Answer Question	Assign QAR Classification	Justify Classification
1. Modeling	T	T	T	T
2. Guided Practice	T	T	T	S
3. Guided Practice	T	T	S	S
4. Independent Practice	T	S	S	S
5. True Ownership	S	S	S	S

Note. T = Teacher does subtask, S = Student does subtask

Figure Caption

Figure 1. The Gradual Release of Responsibility Model of Instruction (after Pearson & Gallagher, 1983).


PROPORTION OF RESPONSIBILITY
FOR TASK COMPLETION
ALL TEACHER
JOINT RESPONSIBILITY
ALL STUDENT
MODELING
GUIDED PRACTICE
Gradual Release of Responsibility
PRACTICE
OR
APPLICATION